

A Report of Attempts to Produce Uniocular
Blindness by Hypnotic Suggestion.

Frank A. Pattie, Jr.

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1465. Pattie, F.A. A report of attempts to produce uni-ocular blindness by hypnotic suggestion. Brit. J. med. Psychol., 1935, 15, 230-241.--Five subjects, all good somnambulists, were used in an attempt to secure uniocular blindness by hypnotic suggestion. None showed genuine blindness: three made no attempt to deceive; one was an active malingerer; the fifth was so clever at malingerer as to make the symptoms appear to be real during several months of experimentation. A detailed history is given of this last case. Tests were made with a stereoscope, with a perimeter, with filters, and with Flees' box; the blind spot was plotted in the seeing eye while both eyes were open; an ophthalmological examination was made. All of these tests seemed to indicate that the uniocular blindness was genuine; only a later more difficult filter test finally proved the malingerer. The methods employed in malingerer were recovered under deeper hypnosis, with obvious signs of agitation on the part of the subject. The case is interpreted as revealing conflict between the tendency to believe the suggestion that the eye was blind and the tendency to malingering, knowing that the eye was really normal. The tendencies to malingering were repressed and dissociated.--E.R.Hilgard (Stanford).



AMERICAN FOUNDATION
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A REPORT OF ATTEMPTS TO PRODUCE UNIOCLAR BLINDNESS BY HYPNOTIC SUGGESTION.

BY FRANK A. PATTIE, JR.

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THE experiments here reported were inspired by a statement of Prof. McDougall on the genuineness of hypnotically induced unioclar blindness. He firmly believes that genuine, unsimulated blindness, due to an interruption of functional continuity within the nervous system, may be produced in the hypnotic trance.¹

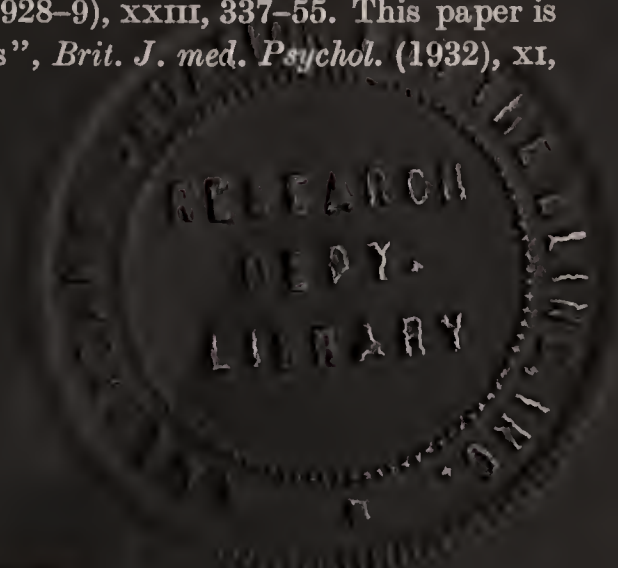
The history of experimental work on this subject is meagre. Pierre Janet² reported his experience with functional unioclar amaurosis occurring in hysteria, stating that this disturbance disappears when the patients are put into situations where binocular vision is used and they cannot tell what is stimulating each eye, as in the case of Flees's box, a test for malingering. I have found in the literature no experiments on producing blindness hypnotically except those of Lundholm.³ His experiments differ from mine in that (1) his visual anaesthesias were produced only in the post-hypnotic period as a result of suggestion given in the trance; (2) they did not involve a single eye; (3) they were produced for particular impressions, such as the lighting of a lamp, rather than for all visual impressions from one eye. Lundholm presents, in addition to his factual findings, a theory to account for such anaesthesias.

In my work five subjects, all good somnambulists, were used. None showed any genuine blindness when tested with adequate malingering

¹ William McDougall, *Outline of Abnormal Psychology* (1926), pp. 89-90.

² Pierre Janet, *The Major Symptoms of Hysteria*, 1907, pp. 188-95; *Névroses et Idées Fixes* (1898), II, 278-82. Reference is made in his *Mental State of Hystericals* to work by Parinaud, Régnaud, and Bernheim on hysterical amaurosis, which agrees with that of Janet as to the facts. For a bibliography on the subject of hysterical defects of vision see E. B. Spaeth, "The differentiation of the ocular manifestations of hysteria and ocular malingering", *Arch. Ophthal.*, N.Y. (1930), IV, 911-38.

³ Helge Lundholm, "An experimental study of functional anaesthesias as induced by suggestion in hypnosis", *J. Abnorm. (soc.) Psychol.* (1928-9), XXIII, 337-55. This paper is summarized in his "A hormic theory of hallucinations", *Brit. J. med. Psychol.* (1932), XI, 269-82.



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P 277

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tests, but they exhibited very interesting differences in their reactions to the suggestion of blindness. Three, *A*, *B*, and *C*, made no great efforts to deceive me; the fourth, *D*, was a rather active malingerer; the fifth, *E*, was so clever at malingerer that for several months I believed that the phenomena in her case were not simulated. Other features of *E*'s case make it necessary to present its history in detail.

Subject *A*, a male student, agreed very readily that he could 'see nothing' out of one eye when the suggestion was given, and added that everything 'looked dark'. He was then asked to look into a stereoscope provided with a card with red and green discs for the demonstration of binocular rivalry. He reported an alternation of red and green, which showed that there was no blindness. When a red filter was placed over the supposedly good eye and he was told to read a card on which his name appeared in green and red letters, he read his whole name. (The red filter renders the red letters invisible.)

Subject *B*, a male, said that he continued to see objects around him quite clearly after the suggestion had been given. When he looked at an acuity chart with Snellen letters, he reported some blurring. In hypnosis, the visual acuity of his left eye was $V1 + 2/10 - 2$. After blindness had been suggested in that eye, he reported blurring, showed a good deal of hesitation in reading the test letters and made frequent mistakes. He began reading the largest letters, and his acuity seemed to improve gradually. Two and a half minutes after beginning to read his acuity was $V1 - 2$. There is no reason to believe that this alleged temporary blurring is genuine; the subject may have made voluntary accommodative changes so as to throw the letters out of focus.

C, a male student, could not be blinded by suggestion; objects were still seen out of the 'blind' eye. When asked to read the acuity chart ten times in succession with the 'blind' eye, the suggestion of unocular blindness being given before each reading, he reported a very slight blurring during two readings. The blurring was not so great as to cause a measurable diminution of acuity. During this reading test, the 'blind' eye closed spontaneously three times, and *C* could not open it. At his request, I restored his ability to open it by suggestion.

D, a male student of architecture, reported a blurring of vision when the 'blind' eye was used. Objects were blurred in outline; the 'blind' eye gave an image "like that made with a soft-focus lens". When *D* looked into a stereoscope, he reported binocular rivalry. When green was before the supposedly bad eye and red before the other, he said he saw red which alternated with grey. When the filter test (mentioned above in the account

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of *A*) was used, *D* passed it by suppressing the red letters. Some months after these first experiments, *D* was caught malingering in two different tests. *D*'s malingering will be discussed below in connection with malingering tests.

E is a girl who, like the other subjects, has a good knowledge of the fundamental facts of hypnosis. I consider her the best subject of the group, since the phenomena produced in her trances are very striking. While in the trance she looks directly into my face all the time; if someone interposes some obstacle which cuts off her view, she moves so as to continue looking at me. Her attitude is quite serious and one of the most painstaking obedience. Her amnesia for the events of the trance is so complete that I cannot single out particular happenings and make her remember them afterwards. On one occasion my experiments were interrupted by a telephone call for her; she made an appointment over the telephone and was told that, upon waking, she would remember the conversation. When she was later told of the call, she was not able to recall or recognize it. On another occasion she received a telephone call shortly after being brought out of a trance; a few minutes thereafter she said, when I made some remark about the telephone conversation, that she had forgotten all about it. I then rehypnotized her, and she recovered the memories of the conversation. During the trance she develops, apparently spontaneously, an anaesthesia for the voices of other persons than me; this anaesthesia can be removed temporarily by suggestion. While in the trance, she shows a definite change of mood; she is quite grave, even sad, and is unusually sensitive to any remarks which might possibly be construed as uncomplimentary to her. On one occasion I intended to compliment her on her appearance, saying, "You are looking pretty to-day". This statement, which normally would provoke no definite reaction, was interpreted as irony and as "making fun of her", and she began to cry. This is only one of several instances of abnormal sensitiveness. (*E* is normally slightly sensitive about her facial appearance, though she is considered rather attractive facially.) It should be emphasized that *E* in her normal state shows no tendencies which could be called neurotic; from an acquaintance of over two years, I can say that she is entirely normal.

When *E* was told in the trance that one eye was blind, her reports indicated that the eye lost completely colour perception and acuity, while its light perception was unimpaired. When placed within 2 ft. of an oculist's acuity chart, she said she could see no letters whatever, but the brightness recorded by the 'blind' eye when an illuminated surface was viewed was the same as that by the normal eye. If coloured spectacles

were put on, she said she could not tell the colour before the 'blind' eye. If objects, such as the hand, were moved in its field, she reported a momentary brightening or flicker. The pupillary reaction to light and the blinking of the lids in response to a sudden light or to feinting movements of my hands were apparently normal.

The following tests which were made on *E* are described in an order which, in general, reproduces the chronological order of the tests.

(1) *Tests with the stereoscope.* *E* looked into a Holmes-Brewster stereoscope, which was clamped to an upright stand. Various stereograms were used, including some of the Titchener series. When one eye was 'blind' and both were kept open, *E* would describe only the field before the 'good' eye. Results were positive, *i.e.* indicating a functional blindness, from the very start. An assistant watched *E*'s eyes through the lenses of the stereoscope to be sure that she was keeping both eyes open. Binocular rivalry was apparently completely suppressed. *E*, with both eyes open, would look for five minutes and report nothing but the coloured disc which was before the 'good' eye.

As a control experiment with the stereoscope and binocular rivalry cards, *E* was told while in the trance with normal vision that she could name the colour that was before the left eye. The purpose of this experiment was to see if the subject had been malingering or not; if she could name the colour before one eye, then she must have had knowledge which would enable her to mangle, and the stereoscope tests would then be of no value. At the beginning of the experiment, *E* stated that such an idea was absurd, that she knew that she could not tell, except by a pure guess, what colour was before one eye in this situation. I insisted that she could, and tried to overcome this resistance. Various combinations of colours were used on the cards. In 100 trials *E* responded correctly in sixty-five cases. The result of each response was called out as right or wrong so that *E* could improve through knowledge of success and failure if possible. On a subsequent day *E* made only two mistakes in 100 trials. *E* stated that she did not know how she was able to respond correctly, that she "simply saw one of the colours first and reported it". Inspection of her eyes through the lenses of the stereoscope showed quite clearly that she was diverging her eyes slightly, which would have the effect of separating the two images. To respond correctly she had only to report the left-hand image, which she did within 1 or 2 sec. after the card was exposed. *E* had *apparently* acquired this ability gradually; this fact led me to believe that she had not possessed this ability when the original tests were made, and that the stereoscope experiments should be taken at their face value.

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This conclusion (erroneous, as will be seen later) was strengthened by the fact that I repeated a few binocular rivalry experiments, instructing *E* not to diverge her eyes or to use any other means to separate the images. The results were positive. I did not detect with certainty any eye movements of this sort. I now believe that my observation was faulty.

When *E*, in the trance, was told that she would be blind in one eye after she was brought out of the trance, she said, upon waking, "If you meant for my eye to be blind, the suggestion is not working, for I can see out of it. Everything looks blurred, however, just as if I had water in it." When asked to look into the stereoscope, she said that binocular rivalry occurred. A quantitative record was made, which showed that the colour before the 'blind' eye was delayed in making its first appearance (normally, it appeared within 2 sec.; with post-hypnotic 'blindness', from 17 to 57 sec. after exposure), and when it did appear it was present only from one-third to one-fifth of the normal time. The data are remarkably consistent. *E* volunteered the information that when the colour before the 'blind' eye appeared, it at no time covered the whole disc (diameter 32 mm.). Such bits of volunteered information strengthened the impression that the results were genuine.

(2) *Perimetry*. First procedure: blindness in the right eye was suggested, and the limit of the left eye's field was determined with both eyes open and the left eye fixating the centre of the perimeter arm. Second procedure: normal vision was suggested, the right eye was covered up, and the limit was obtained as before. An assistant watched *E*'s eyes during the first procedure. On the first of three sittings, the perimeter arm was covered with grey paper so as to eliminate any landmarks which might be utilized by *E*. A 1° test object was used in all the perimetric work. Results for the first procedure were: The limit of the left eye's field was 54° when the object was moved outwards, 68° when moved inwards. When the right eye was covered (the second procedure), corresponding figures were 53° and 61°. Illumination on the perimeter arm was daylight. On repetition of the experiment some days later, corresponding results were: 54° and 60° for the first procedure, 56° and 59° for the second. When *E* was asked to guess (with normal vision, both eyes open) where the left eye's limit would be found, she guessed 44° (mean of ten guesses). Illumination on the perimeter arm was artificial in this sitting and the next. A Bausch and Lomb perimeter with a daylight lamp above the arm was used. The experiment was also done with the left eye 'blind'. The limits of the right field were 36° for the first procedure, 38° for the second. *E*'s guess as to the limit was 55°. These results are



anomalous; the field should extend much further. At the time of this last sitting, I had begun to believe that *E* was malingering. In all of these measurements of the visual field sixty determinations of the limit were made and averaged in each procedure. The mean deviation for all sets of measurements does not exceed 2° .

(3) *Filter experiments.* I wrote *E*'s name in red and green letters. I held a red filter before the 'good' eye and had her open both eyes and read what she saw. She read only the green letters. I then repeated the test, holding a green filter over her 'good' eye. She then read her whole name. This last test was especially convincing, since the green filter was actually too light to render the green letters invisible, although it seemed to be about as deep in colour as the red filter. It seemed that if *E* were malingering she would have suppressed the green letters in this second test and thus have been trapped. No one could have told with certainty, in advance of a trial, that the green filter would not suppress the green letters.

(4) *Experiments with Flees's box.* When the subject looks through two apertures into this box, the reflected images of two coloured discs are seen; mirrors are so arranged that the right-hand image is seen by the left eye, and *vice versa*, which is supposedly contrary to usual expectation. The box was devised for the detection of malingerers who claim loss of sight in one eye.¹ *E* reported only the disc on the side of the good eye. She was carefully watched to insure that both eyes were kept open and not blinked. Some months later the box was modified so that by pressing a lever two other mirrors could be brought into position inside the box which would reflect the discs but would not reverse the images. The tests with the unreversed images were also positive.

(5) *The plotting of the blind spot.* The first attempt to plot the blind spot of one eye while the other was 'blind' and open gave negative results. The subject reported a disappearance of the test object at various places in the field, but the blind spot's area was very variable and the test object would disappear and reappear at parts of the field which I knew to be much above and below the blind spot. The first attempt was followed by a second one some days later, which gave excellent and consistent results which were quite close approximations to the actual size

¹ The plan of the box is given in a figure in Pierre Janet, *Major Symptoms of Hysteria*, p. 191. My experience with this box indicates that it is of very doubtful value when used with intelligent subjects. Three subjects (including *E*) were able to fake the test with the box as shown in Janet's plan, since they saw the images were reflected in mirrors and inferred that they must be reversed.

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of the spot when the plane of projection was 1 m., 50 cm., and 25 cm. from the eye. Control of the eyes was adequate; no unusual blinking was noticed during the tests.

(6) *Ophthalmological examination*.¹ Under homatropine, the refractive error of each eye was determined; the error of each was the same and was corrected by a spherical lens of 0.25 dioptré. The eyes were, then, practically emmetropic. Near points were: left eye, 10 cm.; right, 11 cm. Muscle balance (phorometer test), normal. Fundi, normal. Vision was not improved by any lens tried after blindness had been suggested in hypnosis.

(7) *Further filter tests*. After making the above tests, I was convinced that the blindness was genuine. However, at the suggestion of Dr R. M. Dorcus, Johns Hopkins University, I undertook more experiments involving filters. I devised a more adequate malingering test involving filters. With a red filter over the 'good' eye and green over the 'blind'

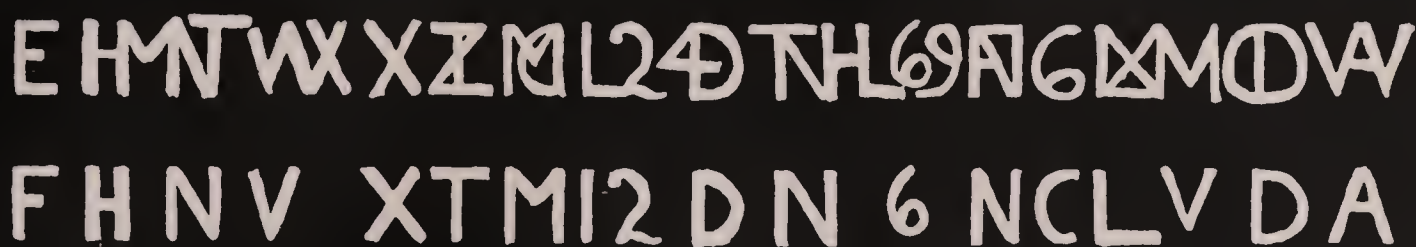


Fig. 1.

one, *E* was directed to read the letters appearing on a card. The appearance of a portion of a test card when both eyes are functioning is given in Fig. 1, upper line. The characters were written in nine different colours of pencil. Those rendered invisible by the red filter were: red, pink, orange, yellow. The others were: purple, blue, blue-green, apple green, green. The lower line (Fig. 1) shows how the line should appear through the red filter. This test is a great improvement over the older one in which only two colours, red and green, were used and the letters were written entirely in one colour and possessed no common lines. In my test a letter, visible through the red filter, was usually composed of lines made with several different colours. When *E* was given this test, there was no evidence that the 'blind' eye's functions had been impaired to the slightest degree. The results of all former tests were thus invalidated.

The day before I gave these final filter tests to *E*, I called in *D* for the same tests. He was directed to look through two 2-inch square glass-mounted filters which he held in his hand. (In *E*'s case, the filters were

¹ I am grateful to Dr Norma E. Israel, Houston, Texas, for her kindness in making these tests.

used in a goggle-like device, which insured that the filters could not be moved.) I caught him malingering; he moved the filters slightly to one side and looked through the red filter with both eyes. When I corrected this, he failed on the test. He was also caught on the modified Flees's box; when the images were not reversed, he suppressed the wrong one. He was caught in a third way by having him view, with a green filter before his good eye, his own name written in green and pink letters. He suppressed the pink letters, but when I questioned him further he admitted seeing them. *D* was thus shown in three ways to be malingering.

Perhaps it will be instructive to give some of the considerations, in addition to *E*'s general demeanour during the experimentation, which strengthened my impression that her blindness was genuine. (1) The fact that *B* and *C* were not malingering, in that they reported that they could see objects quite clearly, made it seem reasonable to suppose that *E* was also not malingering but was exhibiting genuine blindness simply because she was a better subject than the others and hence more influenced by suggestion. (2) *E* reported an unimpaired light perception. I asked myself, "If she is lying about her blindness, then why does she still admit seeing light?" It would have been just as easy to lie about other aspects of vision as about acuity. (3) I had the naïve idea that subjects under hypnosis carry out all instructions given unless the instructions are contrary to their moral principles or well established tendencies. I thought that, since heightened suggestibility is the chief characteristic of hypnosis, the subjects would naturally be highly suggestible and therefore perfectly obedient to such orders as to keep both eyes open, etc. (4) I thought that my control experiments (*e.g.* with the stereoscope, perimeter, etc.) were valid controls, whereas they were not. For example, *E*, with both eyes open, indicated that the boundary of the right eye's field was 36°. I then covered up the left eye and thought that I could obtain the actual physiological limit of this field. I did not get the actual limit, since the subject in the first procedure had been malingering and continued to do so in the second procedure in order to sustain the appearance of genuine blindness. In other words, she "lied and stuck to it". The control experiments could not have preceded those with suggested blindness—at least not by any short interval of time—since in that event the subject would have acquired the knowledge necessary for later malingering. Probably the best plan would have been to make the control experiments afterwards in the normal state, but there is some reason for believing (see later parts of this paper) that even in that event the subject might mangle so as to make the latter tests agree with the trance tests.

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A few days after *E*'s simulation had been detected, she was hypnotized in order to find out the methods she had used in her malingering. I first asked her if she had been conscious of faking any tests; she said no. When I asked if she believed that her eye had been actually blind, she said, "It *was* blind". She gave no answer when asked what she thought of the latest filter experiments. I then fastened the two filters over her eyes, suggested unocular blindness, and asked her to read. She made unsuccessful attempts to sham blindness, suppressing certain letters which should have been visible and incorrectly reading others. I asked, "These experiments show that your eye is not blind, don't they?" She said, "I suppose it isn't if you think so. But it *is*. I will say that if you want me to say it, but I can't see out of it." I then told her, as I stroked her forehead, that I was going to hypnotize her more deeply and get in touch with that part of her which faked the tests. I then got from her, with a great deal of difficulty, information as to her methods. Questions and answers were recorded stenographically. She at first stated that she did not know her methods, that she could not remember. I persuaded her to remember, recovering a little bit at a time, but evidently a very great conflict was going on; she clenched her fists, tossed about in the chair, and showed a great deal of agitation in her vocal and facial expressions. She would begin a sentence and stop after saying two or three words, saying that she could remember no more. I would then tell her that the memories which she was trying to recall would come back when I counted three and snapped my fingers. This method was usually quite successful, bringing out a rush of words as soon as the signal was given. Then more resistance was encountered. She began crying at one point and continued to be tearful, in spite of my efforts to quiet her, for ten or more minutes.

In describing her methods, she said that in the stereoscope tests, the two images were separated momentarily "just a second after exposure". This gave her the necessary knowledge for faking. I next brought up the blind spot plotting. She said that she was able to do that "because I must have known . . .", that she could not remember exactly how she did it, that it seemed that she had plotted it in her laboratory work sometime in the past (which was not the case). She showed signs of great agitation and began to cry. I then thought it best to leave this subject and return to it later. I then asked about the perimeter tests. She continued to be emotionally worked up, putting her head on the arm of the chair and beginning to cry with renewed force. I asked why she was crying; she said, "I don't know. It is something I can't remember." After a few

moments of further crying, tossing about, and clenching her fists, she said suddenly that the memories had come back, that she had practised on the blind spot at home after the first attempt to plot it; that she had called in a girl, *H*, to help her by holding a black velvet jacket against the wall; that in this way she had found out just where the spot ought to be. (*H* confirms this account.) At the time, she could not understand why she was doing this work and thought that perhaps she was becoming more interested in psychology. After this 'home-work', she had forgotten all about it.

Her reactions in the perimeter experiment were based on her knowledge as to the approximate location of the field boundaries. No 'home-work' on the perimeter was done, and she complied perfectly with instructions to keep both eyes open. About Flees's box with crossed images she said, "I saw there were mirrors in there, and I figured somehow that the one on the left was supposed to be seen with the right eye, or else it would be no test, and that it would just be a stupid person who would think any differently." When the images were later uncrossed, she said that, in spite of the fact that I was watching her eyes, she blinked one quickly and thus got the necessary knowledge. When she was being examined by the physician, she knew all the time that she could see, but since I had said that she could not, she acted as if she did not. "You said, 'you are blind in that eye', and that is what I said, but something else inside said, 'you are not'." The first filter test was worked correctly because she knew that "red through red won't show". I did not get a satisfactory account of her method of faking the test with the green filter which rendered no letters invisible; she stated that she knew how to do it, and I learned nothing more. I asked why, if she had been malingering, she did not state that she was unable to see light. She said, "I remember thinking that if an eye were blind, it could still see light."

Near the beginning of the sitting, after I had begun to get some information from *E* against great resistance, I asked, "Are you ashamed to tell your methods of faking?" and she answered no. I then asked why she had shown so much resistance in talking about them, and she answered, "Because I can't remember". Later, I asked, "Do you feel humiliation in giving these reports?" She said, "Yes, something does, and something doesn't. I want to tell the truth, and I know it, and something doesn't want to. Something makes me keep forgetting it, and I know I know it. It just goes, and I can't say it, and it makes my head ache and swim."

After finding out how she had done work at home on the blind spot,

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and after she had stated that she had had no memory of it in her normal waking state, I told her that upon awakening she would remember it. When she came out of the trance, I mentioned the work at home, and she added some other details and remarked that she had previously forgotten all about it. The emotional disturbance manifest in the trance, which lasted about 45 min., left traces in *E* after waking. She then complained of dizziness, faintness, 'swimming movements' of objects around her (though her eyes were perfectly steady), and headache. In addition, she expressed some apprehension about her condition. Within 15 min. she was normal except for the headache, which persisted for about an hour. Such after-effects had never appeared prior to this occasion. I wanted to hypnotize *E* on a later occasion to follow up some features of the case, but she declined to allow it, on account of the unpleasant after-effects which followed the last trance.

I believe that this case demands interpretation according to the principles established by the work of Pierre Janet and Morton Prince. The suggestion of blindness produced a conflict between two sets of tendencies: the first set was to believe that the eye was actually blind and to obey instructions carefully, the second set was to know that the eye was really normal and to mangle, utilizing knowledge acquired either previously or during the process of malingering. During the tests, the first set was dominant and was a part of the personality which was in communication with me, but the second set of tendencies was nevertheless controlling *E*'s behaviour subconsciously. *E* was apparently not aware of the malingering tendencies at the time of the tests, nor could she recall them to memory until the occasion of the last trance.

These tendencies to mangle were repressed and dissociated. This statement is based upon the following facts: (1) *E*, at the beginning of the last sitting, refused to accept the evidence that her eye was not blind. (2) She only gradually and with a considerable show of resistance acquired, or appeared to acquire, the ability to discover what colour was before a given eye in the stereoscope, though she had been using this knowledge for a long time previously. (3) After acquiring the ability to diverge her eyes in this situation she said that she did not know how she was able to name the colour. (4) She showed extreme resistance to recalling the memories of her methods of faking and stated that she had great difficulty in remembering. (5) She herself describes a condition of amnesia and dissociation. (One of her statements, that describing the physician's examination, tends to indicate that she was conscious of both sets of tendencies at the same time; but it is my belief that this statement,

which was made rather late in the trance, after the subject had become relatively calm and the signs of conflict and amnesia had almost disappeared, may possibly represent the subject's condition after the memories belonging to the malingering tendencies had been merged with the rest of the personality.) (6) Further, and here is perhaps the best evidence for dissociation, the malingering tendencies interrupted the normal waking personality temporarily in order to obtain knowledge of the blind spot, while the normal personality knew nothing of the motive of the action and immediately thereafter had no memory of it. Since the malingering integrate could thus interrupt the waking life, it seems possible that it might again emerge on the occasion of later control experiments in the normal state and modify the results so as to sustain the appearance of a genuine anaesthesia. Perhaps this possibility should be considered in experiments of this type.¹ If the subject later should exhibit amnesia for the control experiments, that would be evidence of such an emergence of the malingering tendencies.

My interpretation of these experiments is, I think, in complete harmony with Lundholm's theory of anaesthesia for particular impressions. They cast great doubt on the possibility of producing by suggestion such an interruption of functional continuity in the nervous system as will produce blindness. They suggest also that the same dissociated conative processes involved in *E*'s 'blindness' may be active in other forms of hypnotically induced anaesthesia.²

¹ In R. R. Sears's experiments on pain anaesthesia, *J. exp. Psychol.* (1932), xv, 1-22, control experiments were done in the normal state *subsequently* to the trance experiments, in which the subjects were asked to simulate an anaesthesia of one leg. The facial flinch in response to the pain stimulation was recorded, and it was found that the directions given the subjects to simulate anaesthesia had practically no influence whatever on the frequency of occurrence of the flinch. C. L. Hull (*Hypnosis and Suggestibility* (1933), p. 267) discusses the results and states that the experiment should be repeated "so as to provide assurance that the subjects really exert themselves to the maximum to suppress the signs of pain". These control experiments should be done at the very beginning, before the subjects have been hypnotized, in order to eliminate any possible malingering as a result of tendencies set up in the trance.

² Neither Sears nor J. B. Dynes (in his work on auditory anaesthesia, *J. Abnorm. (soc.) Psychol.* (1932), xxvii, 79-88) made any attempt to get reports from their subjects descriptive of stimuli received by the anaesthetic skin and ear. This is a point of method which should not be neglected; it is important both in order to make a complete study of anaesthesias and to investigate the similarity between hypnotic and hysterical anaesthesias.

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1530	12 "	$9\frac{1}{8}$ "	"

Other sizes made to order

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